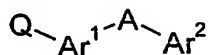


**CLAIMS**

1. A compound in accord with formula I:

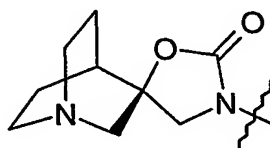


5

I;

and pharmaceutically-acceptable salts thereof, wherein:

Q is a moiety of formula II

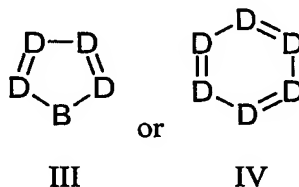


II;

10

-A- is selected from -O-, -S-, or -NR<sup>1</sup>-, or is a bond directly connecting Ar<sup>1</sup> and Ar<sup>2</sup>;

Ar<sup>1</sup> is selected from formula III or IV:



15

wherein B is O, S, or NR<sup>1</sup>;

R<sup>1</sup> is independently at each occurrence selected from hydrogen or R<sup>3</sup>;

D is independently at each occurrence selected from N or CR<sup>2</sup>, provided that D is N at no more than two occurrences;

R<sup>2</sup> is independently at each occurrence selected from hydrogen, -R<sup>3</sup>, -C<sub>2</sub>-C<sub>6</sub>alkenyl, -C<sub>2</sub>-C<sub>6</sub>alkynyl, halogen, -CN, -NO<sub>2</sub>, -C(O)R<sup>4</sup>, -S(O)<sub>n</sub>R<sup>5</sup>, -NR<sup>6</sup>R<sup>7</sup>, -OR<sup>8</sup>, Q or a bond, provided that R<sup>2</sup> is Q at one occurrence, and at one occurrence is a bond connecting Ar<sup>1</sup> to A, or when -A- is a bond, to Ar<sup>2</sup>;

R<sup>3</sup> is selected from an unsubstituted straight-chained, branched, or cyclic C<sub>1</sub>-C<sub>6</sub>alkyl group, or selected from a straight-chained, branched, or cyclic C<sub>1</sub>-C<sub>6</sub>alkyl group substituted with up to five halogen atoms, and up to two substituents selected from: C<sub>2</sub>-C<sub>6</sub>alkenyl, C<sub>2</sub>-C<sub>6</sub>alkynyl, -CN, -C(O)R<sup>4</sup>, -S(O)<sub>n</sub>R<sup>5</sup>, -NR<sup>6</sup>R<sup>7</sup>, or -OR<sup>8</sup>;

25

$R^4$  is independently at each occurrence selected from hydrogen,  $R^9$ ,  $-NR^{10}R^{11}$ , or  $-OR^8$ ;

$R^5$  is independently at each occurrence selected from hydrogen,  $R^9$ , or  $-NR^{10}R^{11}$ ;

$R^6$  and  $R^7$  are independently at each occurrence selected from hydrogen,  $R^9$ ,  $-C(O)R^4$  or  $-S(O)_nR^5$ , or in combination at any one occurrence of  $-NR^6R^7$  are  $(CH_2)_pG(CH_2)_q$  where G is O, S,  $NR^8$  or a bond;

$R^8$  is selected from hydrogen or  $R^9$ ;

$R^9$  is selected from an unsubstituted straight-chained, branched, or cyclic  $C_1$ - $C_6$ alkyl group, or selected from a straight-chained, branched, or cyclic  $C_1$ - $C_6$ alkyl group substituted with up to five halogen atoms, and up to one substituent selected from:  $C_2$ - $C_6$  alkenyl,  $C_2$ - $C_6$  alkynyl,  $-CN$ ,  $-NR^{10}R^{11}$ ,  $-OR^{12}$ ;

$R^{10}$  and  $R^{11}$  are independently at each occurrence selected from hydrogen,  $R^{12}$ ,  $-C(O)R^{12}$ ,  $-S(O)_nR^{12}$ , or in combination at any one occurrence of  $-NR^{10}R^{11}$  are  $(CH_2)_pJ(CH_2)_q$  where J is O, S, NH,  $NR^{12}$  or a bond;

$R^{12}$  is selected from an unsubstituted straight-chained, branched, or cyclic  $C_1$ - $C_6$ alkyl group, or selected from a straight-chained, branched, or cyclic  $C_1$ - $C_6$ alkyl group substituted with up to five halogen atoms;

$Ar^2$  is selected from an unsubstituted 5- or 6-membered aromatic or heteroaromatic ring containing zero to two nitrogen atoms, zero to one oxygen atoms, and zero to one sulfur atoms, or selected from an 8-, 9- or 10-membered fused aromatic or heteroaromatic ring system containing zero to three nitrogen atoms, zero to one oxygen atom, and zero to one sulfur atom, or is selected from a 5- or 6-membered aromatic or heteroaromatic ring containing zero to two nitrogen atoms, zero to one oxygen atoms, and zero to one sulfur atoms, or is selected from an 8-, 9- or 10-membered fused aromatic or heteroaromatic ring system containing zero to three nitrogen atoms, zero to one oxygen atom, and zero to one sulfur atom where each foregoing  $Ar^2$  moiety may bear one to three substituents selected from  $R^3$ ,  $C_2$ - $C_6$ alkenyl,  $C_2$ - $C_6$ alkynyl, halogen,  $-CN$ ,  $-NO_2$ ,  $-C(O)R^4$ ,  $-S(O)_nR^5$ ,  $-NR^6R^7$ ,  $-OR^8$ ;

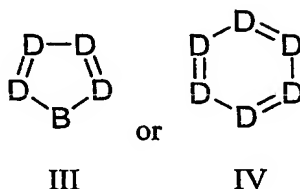
n at each occurrence is 0, 1, or 2;

p at each occurrence is 2, 3, or 4;

q at each occurrence is 0, 1, or 2.

2. A compound according to Claim 1, wherein:

Ar<sup>1</sup> is selected from formula III or IV:



5 B is O, S, or NR<sup>1</sup>;

R<sup>1</sup> is independently at each occurrence selected from hydrogen or R<sup>3</sup>;

D is independently at each occurrence selected from N or CR<sup>2</sup>, provided that D is N at two occurrences;

10 R<sup>2</sup> is independently at each occurrence selected from hydrogen, -R<sup>3</sup>, halogen, -CN, -NO<sub>2</sub>, -C(O)R<sup>4</sup>, -S(O)<sub>n</sub>R<sup>5</sup>, -NR<sup>6</sup>R<sup>7</sup>, -OR<sup>8</sup>, Q or a bond, provided that R<sup>2</sup> is Q at one occurrence, and at one occurrence is a bond connecting Ar<sup>1</sup> to A, or when -A- is a bond, to Ar<sup>2</sup>;

15 R<sup>3</sup> is an unsubstituted straight-chained, branched, or cyclic C<sub>1</sub>-C<sub>6</sub>alkyl group, or a straight-chained, branched, or cyclic C<sub>1</sub>-C<sub>6</sub>alkyl group substituted with up to five halogen atoms, and up to two substituents selected from: -CN, -C(O)R<sup>4</sup>, -S(O)<sub>n</sub>R<sup>5</sup>, -NR<sup>6</sup>R<sup>7</sup>, or -OR<sup>8</sup>;

R<sup>4</sup>, R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup> and R<sup>8</sup> are independently at each occurrence selected from hydrogen or R<sup>9</sup>;

20 R<sup>9</sup> is selected from an unsubstituted straight-chained, branched, or cyclic C<sub>1</sub>-C<sub>6</sub>alkyl group, or is selected from a straight-chained, branched, or cyclic C<sub>1</sub>-C<sub>6</sub>alkyl group substituted with up to five halogen atoms, and up to one substituent selected from: -CN, -NR<sup>10</sup>R<sup>11</sup> -OR<sup>12</sup>;

R<sup>10</sup> and R<sup>11</sup> are at each occurrence hydrogen;

25 R<sup>12</sup> is selected from an unsubstituted straight-chained, branched, or cyclic C<sub>1</sub>-C<sub>6</sub>alkyl group, or selected from a straight-chained, branched, or cyclic C<sub>1</sub>-C<sub>6</sub>alkyl group substituted with up to five halogen atoms;

-A- is selected from -O-, -S-, or -NR<sup>1</sup>-, or is a bond directly connecting Ar<sup>1</sup> and Ar<sup>2</sup>;

30 Ar<sup>2</sup> is selected from unsubstituted phenyl; 2-pyridyl, 3-pyridyl or 4-pyridyl; 2-pyrimidyl, 4-pyrimidyl or 5-pyrimidyl; 2-pyrazinyl or 3-pyrazinyl; 2-furyl or 3-furyl;

2-thiophenyl or 3-thiophenyl; 1-pyrrolyl, 2-pyrrolyl or 3-pyrrolyl; 2-quinazolyl, 4-quinazolyl or 5-quinazolyl; 2-oxazolyl, 4-oxazolyl or 5-oxazolyl; 2-imidazolyl, 4-imidazolyl or 5-imidazolyl; 1-naphthyl or 2-naphthyl; 2-quinolyl, 3-quinolyl, 4-quinolyl, 5-quinolyl, 6-quinolyl, 7-quinolyl or 8-quinolyl; 1-isoquinolyl, 3-isoquinolyl, 4-isoquinolyl;  
 5 5-isoquinolyl, 6-isoquinolyl, 7-isoquinolyl or 8-isoquinolyl; 2-benzofuranyl, 3-benzofuranyl, 4-benzofuranyl, 5-benzofuranyl, 6-benzofuranyl or 7-benzofuranyl, 2-benzo[b]thiophenyl, 3-benzo[b]thiophenyl, 4-benzo[b]thiophenyl, 5-benzo[b]thiophenyl, 6-benzo[b]thiophenyl or 7-benzo[b]thiophenyl; 2-indolyl, 3-indolyl, 4-indolyl, 5-indolyl, 6-indolyl or 7-indolyl; 2-benzoxazolyl, 4-benzoxazolyl, 5-benzoxazolyl, 6-benzoxazolyl;  
 10 or 7-benzoxazolyl; 2-benzthiazolyl, 4-benzthiazolyl, 5-benzthiazolyl, 6-benzthiazolyl or 7-benzthiazolyl; or is selected from any foregoing Ar<sup>2</sup> moiety substituted with one to three substituents selected from R<sup>3</sup>, C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-C<sub>6</sub> alkynyl, halogen, -CN, -NO<sub>2</sub>, -C(O)R<sup>4</sup>, -S(O)<sub>n</sub>R<sup>5</sup>, -NR<sup>6</sup>R<sup>7</sup>, -OR<sup>8</sup>;

n at each occurrence is 0, 1, or 2.

15

3. A compound according to Claim 1, wherein: R<sup>2</sup> is Q at one occurrence and is a bond connecting Ar<sup>1</sup> to A at one occurrence and otherwise is hydrogen.

20

4. A compound according to Claim 1, wherein Q and -A-Ar<sup>2</sup> are in a 1,3 relationship with one another on Ar<sup>1</sup>.

5. A compound according to Claim 1, wherein -A- is a bond directly connecting Ar<sup>1</sup> and Ar<sup>2</sup>.

25

6. A compound according to Claim 1, wherein Ar<sup>1</sup> is a moiety of formula III.

7. A compound according to Claim 1 wherein Ar<sup>1</sup> is selected from a furan ring or a thiophene ring.

30

8. A compound according to Claim 1, wherein Ar<sup>1</sup> is a moiety of formula III and B is selected from O or S.

9. A compound according to Claim 1, wherein Ar<sup>1</sup> is a moiety of formula III and B is S.

10. A compound according to Claim 1, wherein Ar<sup>1</sup> is a moiety of formula III and D is  
 5 CR<sup>2</sup> where R<sup>2</sup> is Q at one occurrence and is a bond connecting Ar<sup>1</sup> to A at one occurrence and otherwise is hydrogen.

11. A compound according to Claim 1, wherein R<sup>3</sup> is selected from:  
 methyl, ethyl,  
 10 linear, cyclic or branched propyl, butyl, pentyl or hexyl,  
 ethenyl or 1-propenyl, 2-propenyl or 3-propenyl,  
 linear, branched or cyclic butenyl, pentenyl or hexenyl,  
 ethynyl or propynyl,  
 chloro, bromo, fluoro or iodo, -CN, -NO<sub>2</sub>, -C(O)R<sup>4</sup>, -S(O)<sub>n</sub>R<sup>5</sup>, -NR<sup>6</sup>R<sup>7</sup> or -OR<sup>8</sup>;  
 15 R<sup>4</sup> is independently at each occurrence selected from hydrogen, R<sup>9</sup>, -NR<sup>10</sup>R<sup>11</sup>, -OR<sup>8</sup>  
 trifluoromethyl, trifluoroethyl, methoxymethyl, trifluoromethoxymethyl, methoxyethyl or  
 trifluoromethoxyethyl;  
 R<sup>5</sup> is independently at each occurrence selected from hydrogen, R<sup>9</sup>, or -NR<sup>10</sup>R<sup>11</sup>;  
 R<sup>6</sup> and R<sup>7</sup> are independently at each occurrence selected from hydrogen, R<sup>9</sup>, -  
 20 C(O)R<sup>4</sup>, -S(O)<sub>n</sub>R<sup>5</sup>, or in combination at any one occurrence of -NR<sup>6</sup>R<sup>7</sup> are (CH<sub>2</sub>)<sub>p</sub>G(CH<sub>2</sub>)<sub>q</sub>  
 where G is O, S, NR<sup>8</sup> or a bond;  
 R<sup>8</sup> is selected from hydrogen or R<sup>9</sup>;  
 R<sup>9</sup> is selected from  
 methyl, ethyl,  
 25 linear, cyclic or branched propyl, butyl, pentyl or hexyl  
 ethenyl or 1-propenyl, 2-propenyl or 3-propenyl  
 linear, branched or cyclic butenyl, pentenyl or hexenyl,  
 ethynyl or propynyl,  
 where any foregoing R<sup>9</sup> moiety may bear up to five chloro, bromo, fluoro or iodo atoms,  
 30 and up to one substituent selected from:  
 -CN, -NR<sup>10</sup>R<sup>11</sup> -OR<sup>12</sup>;

$R^{10}$  and  $R^{11}$  are independently at each occurrence selected from hydrogen,  $R^{12}$ ,  $-C(O)R^{12}$ ,  $-S(O)_nR^{12}$ , or in combination at any one occurrence of  $-NR^{10}R^{11}$  are  $(CH_2)_pJ(CH_2)_q$  where J is O, S, NH,  $NR^{12}$  or a bond;

$R^{12}$  is

- 5 methyl, ethyl,  
linear, cyclic or branched propyl, butyl, pentyl or hexyl  
ethenyl or 1-propenyl, 2-propenyl or 3-propenyl  
linear, branched or cyclic butenyl, pentenyl or hexenyl,  
ethynyl or propynyl,  
10 where any foregoing  $R^{12}$  moiety may bear up to five chloro, bromo, fluoro, iodo atoms,  
 $Ar^2$  is selected from unsubstituted phenyl; 2-pyridyl, 3-pyridyl or 4-pyridyl;  
2-pyrimidyl, 4-pyrimidyl or 5-pyrimidyl; 2-pyrazinyl or 3-pyrazinyl; 2-furyl or 3-furyl;  
2-thiophenyl or 3-thiophenyl; 1-pyrrolyl, 2-pyrrolyl or 3-pyrrolyl; 2-quinazolyl, 4-  
quinazolyl or 5-quinazolyl; 2-oxazolyl, 4-oxazolyl or 5-oxazolyl; 2-imidazolyl, 4-  
15 imidazolyl or 5-imidazolyl; 1-naphthyl or 2-naphthyl; 2-quinolyl, 3-quinolyl, 4-quinolyl, 5-  
quinolyl, 6-quinolyl, 7-quinolyl or 8-quinolyl; 1-isoquinolyl, 3-isoquinolyl, 4-isoquinolyl;  
5-isoquinolyl, 6-isoquinolyl, 7-isoquinolyl or 8-isoquinolyl; 2-benzofuranyl, 3-  
benzofuranyl, 4-benzofuranyl, 5-benzofuranyl, 6-benzofuranyl or 7-benzofuranyl, 2-  
benzo[b]thiophenyl, 3-benzo[b]thiophenyl, 4-benzo[b]thiophenyl, 5-benzo[b]thiophenyl,  
20 6-benzo[b]thiophenyl or 7-benzo[b]thiophenyl; 2-indolyl, 3-indolyl, 4-indolyl, 5-indolyl,  
6-indolyl or 7-indolyl; 2-benzoxazolyl, 4-benzoxazolyl, 5-benzoxazolyl, 6-benzoxazolyl;  
or 7-benzoxazolyl; 2-benzthiazolyl, 4-benzthiazolyl, 5-benzthiazolyl, 6-benzthiazolyl or 7-  
benzthiazolyl; or any foregoing  $Ar^2$  moiety substituted with 1, 2 or 3  $R^3$  substituents.

- 25 12. A compound according to Claim 1, selected from:  
(R)-3'-(5-phenyl-thiophen-2-yl)spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
(R)-3'-[5-(4-pyridyl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
(R)-3'-[5-(3-pyridyl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
(R)-3'-[5-(2-pyridyl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
30 (R)-3'-[5-(thiophen-2-yl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-  
one;

- (*R*)-3'-[5-(thiophen-3-yl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- (*R*)-3'-[5-(furan-2-yl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- (*R*)-3'-[5-(furan-3-yl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- 5 (*R*)-3'-[5-(thiazol-2-yl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- (*R*)-3'-[5-(thiazol-4-yl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- (*R*)-3'-[5-(thiazol-5-yl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- 10 one;
- (*R*)-3'-(4-phenylthiophen-2-yl)spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- (*R*)-3'-[4-(4-pyridyl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- (*R*)-3'-[4-(3-pyridyl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- (*R*)-3'-[4-(2-pyridyl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- 15 (*R*)-3'-[4-(thiophen-2-yl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- (*R*)-3'-[4-(thiophen-3-yl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- (*R*)-3'-[4-(furan-2-yl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- 20 (*R*)-3'-[4-(furan-3-yl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- (*R*)-3'-[4-(thiazol-2-yl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- (*R*)-3'-[4-(thiazol-4-yl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- 25 (*R*)-3'-[4-(thiazol-5-yl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- (*R*)-3'-(2-phenylthiophen-4-yl)spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- (*R*)-3'-[2-(4-pyridyl)thiophen-4-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- (*R*)-3'-[2-(3-pyridyl)thiophen-4-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- 30 (*R*)-3'-[2-(2-pyridyl)thiophen-4-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- (*R*)-3'-[2-(thiophen-2-yl)thiophen-4-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

(*R*)-3'-[2-(thiophen-3-yl)thiophen-4-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

(*R*)-3'-[2-(furan-2-yl)thiophen-4-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

(*R*)-3'-[2-(furan-3-yl)thiophen-4-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

5 (*R*)-3'-[2-(thiazol-2-yl)thiophen-4-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

(*R*)-3'-[2-(thiazol-4-yl)thiophen-4-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

10 (*R*)-3'-[2-(thiazol-5-yl)thiophen-4-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

(*R*)-3'-(5-phenylfuran-2-yl)spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

(*R*)-3'-[5-(4-pyridyl)furan-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

(*R*)-3'-[5-(3-pyridyl)furan-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

(*R*)-3'-[5-(2-pyridyl)furan-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

15 (*R*)-3'-[5-(thiophen-2-yl)furan-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

(*R*)-3'-[5-(thiophen-3-yl)furan-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

(*R*)-3'-[5-(furan-2-yl)furan-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

(*R*)-3'-[5-(furan-3-yl)furan-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

(*R*)-3'-[5-(thiazol-2-yl)furan-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

20 (*R*)-3'-[5-(thiazol-4-yl)furan-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

(*R*)-3'-[5-(thiazol-5-yl)furan-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

(*R*)-3'-(4-phenylfuran-2-yl)spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

(*R*)-3'-[4-(4-pyridyl)furan-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

(*R*)-3'-[4-(3-pyridyl)furan-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

25 (*R*)-3'-[4-(2-pyridyl)furan-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

(*R*)-3'-[4-(thiophen-2-yl)furan-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

(*R*)-3'-[4-(thiophen-3-yl)furan-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

(*R*)-3'-[4-(furan-2-yl)furan-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

(*R*)-3'-[4-(furan-3-yl)furan-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

30 (*R*)-3'-[4-(thiazol-2-yl)furan-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

(*R*)-3'-[4-(thiazol-4-yl)furan-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

(*R*)-3'-[4-(thiazol-5-yl)furan-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;



- (*R*)-3'-(2-phenylfuran-4-yl)spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 (*R*)-3'-[2-(4-pyridyl)furan-4-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 (*R*)-3'-[2-(3-pyridyl)furan-4-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 (*R*)-3'-[2-(2-pyridyl)furan-4-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 5 (*R*)-3'-[2-(thiophen-2-yl)furan-4-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 (*R*)-3'-[2-(thiophen-3-yl)furan-4-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 (*R*)-3'-[2-(furan-2-yl)furan-4-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 (*R*)-3'-[2-(furan-3-yl)furan-4-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 (*R*)-3'-[2-(thiazol-2-yl)furan-4-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 10 (*R*)-3'-[2-(thiazol-4-yl)furan-4-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one, or  
 (*R*)-3'-[2-(thiazol-5-yl)furan-4-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one,  
 or a pharmaceutically-acceptable salt thereof.

13. A compound according to Claim 1, selected from:

- 15 (*R*)-3'-{5-[3-(*N,N*-dimethylcarbamoyl)phenyl]thiophen-2-yl}spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 (*R*)-3'-{5-[3-(*N,N*-diethylcarbamoyl)phenyl]thiophen-2-yl}spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 (*R*)-3'-{5-[3-(pyrrolidine-1-carbonyl)phenyl]thiophen-2-yl}spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 20 (*R*)-3'-{5-[3-(piperidine-1-carbonyl)phenyl]thiophen-2-yl}spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 (*R*)-3'-{5-[3-(morpholine-4-carbonyl)phenyl]thiophen-2-yl}spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 25 (*R*)-3'-[5-(3-aminophenyl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 (*R*)-3'-{5-[3-(*N,N*-dimethylamino)phenyl]thiophen-2-yl}spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 (*R*)-3'-{5-[3-(propionylamino)phenyl]thiophen-2-yl}spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 30 (*R*)-3'-{5-[3-(butyrylamino)phenyl]thiophen-2-yl}spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

- (*R*)-3'-{5-[3-(benzoylamino)phenyl]thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- (*R*)-3'-{5-[3-(2-propoxy)phenyl]thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- 5 (*R*)-3'-[5-(3-trifluoromethoxyphenyl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- (*R*)-3'-[5-(quinolin-2-yl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- (*R*)-3'-[5-(quinolin-3-yl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- 10 (*R*)-3'-[5-(quinolin-4-yl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- (*R*)-3'-[5-(quinolin-5-yl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- 15 (*R*)-3'-[5-(quinolin-6-yl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- (*R*)-3'-[5-(quinolin-7-yl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- (*R*)-3'-[5-(quinolin-8-yl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- 20 (*R*)-3'-[5-(pyrimidin-2-yl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- (*R*)-3'-[5-(pyrimidin-4-yl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- 25 (*R*)-3'-[5-(pyrimidin-5-yl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- (*R*)-3'-(2-phenylthiazol-4-yl)spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- (*R*)-3'-[2-(2-pyridyl)thiazol-4-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- (*R*)-3'-[2-(3-pyridyl)thiazol-4-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- 30 (*R*)-3'-[2-(4-pyridyl)thiazol-4-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- (*R*)-3'-(2-phenylthiazol-5-yl)spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- (*R*)-3'-[2-(2-pyridyl)thiazol-5-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

- (*R*)-3'-[2-(3-pyridyl)thiazol-5-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 (*R*)-3'-[2-(4-pyridyl)thiazol-5-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 (*R*)-3'-[5-(2-pyridyl)-1,3,4-thiadiazol-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 5 (*R*)-3'-[5-(3-pyridyl)-1,3,4-thiadiazol-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 (*R*)-3'-(5-phenyl-1,3,4-oxadiazol-2-yl)spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 (*R*)-3'-(5-phenyloxazol-2-yl)spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 10 (*R*)-3'-[5-(2-pyridyl)oxazol-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 (*R*)-3'-[5-(3-pyridyl)thiazol-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 (*R*)-3'-[5-(4-pyridyl)thiazol-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 (*R*)-3'-(4-phenyloxazol-2-yl)spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 (*R*)-3'-[4-(2-pyridyl)oxazol-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 15 (*R*)-3'-[4-(3-pyridyl)thiazol-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 (*R*)-3'-[4-(4-pyridyl)thiazol-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 (*R*)-3'-(2-phenyloxazol-4-yl)spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 (*R*)-3'-[2-(2-pyridyl)oxazol-4-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 (*R*)-3'-[2-(3-pyridyl)thiazol-4-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 20 (*R*)-3'-[2-(4-pyridyl)thiazol-4-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 (*R*)-3'-(2-phenyloxazol-5-yl)spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 (*R*)-3'-[2-(2-pyridyl)oxazol-5-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 (*R*)-3'-[2-(3-pyridyl)thiazol-5-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 (*R*)-3'-[2-(4-pyridyl)thiazol-5-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 25 (*R*)-3'-[5-(2-pyridyl)-1,3,4-oxadiazol-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 (*R*)-3'-[5-(3-pyridyl)-1,3,4-oxadiazol-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one; and  
 (*R*)-3'-[5-(4-pyridyl)-1,3,4-oxadiazol-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;  
 30 2'-one;

14. A compound according to Claim 1, selected from:

- (*R*)-3'-[5-(2-fluorophenyl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- (*R*)-3'-[5-(3-fluorophenyl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- 5 (*R*)-3'-[5-(4-fluorophenyl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- (*R*)-3'-[5-(2-chlorophenyl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- (*R*)-3'-[5-(3-chlorophenyl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- 10 (*R*)-3'-[5-(4-chlorophenyl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- (*R*)-3'-[5-(3,4-dichlorophenyl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- 15 (*R*)-3'-[5-(3-methylphenyl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- (*R*)-3'-[5-(4-methylphenyl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- (*R*)-3'-[5-(3-methoxyphenyl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- 20 (*R*)-3'-[5-(4-methoxyphenyl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- (*R*)-3'-[5-(3-methoxyphenyl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- 25 (*R*)-3'-[5-(3-trifluoromethylphenyl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- (*R*)-3'-[5-(4-trifluoromethylphenyl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- (*R*)-3'-[5-(3-trifluoromethoxyphenyl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;
- 30 (*R*)-3'-[5-(4-trifluoromethoxyphenyl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

(*R*)-3'-[5-(naphthalen-2-yl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

(*R*)-3'-[5-(benzofuran-2-yl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

5 (*R*)-3'-[5-(benzo[*b*]thiophen-2-yl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

(*R*)-3'-[5-(2-fluoropyridin-3-yl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

(*R*)-3'-[5-(2-chloropyridin-3-yl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

(*R*)-3'-[5-(2-methoxypyridin-3-yl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

(*R*)-3'-[5-(2-aminopyridin-3-yl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

15 (*R*)-3'-{5-[2-(*N,N*-dimethylamino)pyridin-3-yl]thiophen-2-yl}spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

(*R*)-3'-[5-(5-chloropyridin-3-yl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

(*R*)-3'-[5-(5-methoxypyridin-3-yl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one;

(*R*)-3'-[5-(5-aminopyridin-3-yl)thiophen-2-yl]spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one; and

(*R*)-3'-{5-[5-(*N,N*-dimethylamino)pyridin-3-yl]thiophen-2-yl}spiro[1-azabicyclo[2.2.2]octan-3,5'-oxazolidin]-2'-one.

25

15. A compound according to Claim 1, wherein one or more of the atoms of said compound is a radioisotope of said atom.

16. A compound according to Claim 15, wherein the radioisotope is tritium.

30

17. A method for the discovery of novel medicinal compounds which bind to and modulate the activity, by agonism, partial agonism, or antagonism, of the  $\alpha 7$  nicotinic

acetylcholine receptor comprising measuring the displacement of a compound according to Claim 15 from an  $\alpha 7$  nicotinic acetylcholine receptor

18. A method of treatment or prophylaxis of a human disease or condition in which  
5 activation of the  $\alpha 7$  nicotinic receptor is beneficial which comprises administering a therapeutically-effective amount of a compound according to Claim 1.

19. The method of Claim 18, wherein said human disease or condition is selected from neurological disorders, psychotic disorders or intellectual impairment disorders.

10 20. The method of Claim 18, wherein said human disease or condition is selected from Alzheimer's disease, learning deficit, cognition deficit, attention deficit, memory loss, Attention Deficit Hyperactivity Disorder, Parkinson's disease, Huntington's disease, Tourette's syndrome, neurodegenerative disorders in which there is loss of cholinergic  
15 synapses, anxiety, schizophrenia, mania or manic depression.

21. A method of treatment for jetlag, inducing cessation of smoking, nicotine addiction, craving, pain, and for ulcerative colitis, which comprises administering a therapeutically effective amount of a compound according to Claim 1.

20 22. A pharmaceutical composition comprising a compound according to Claim 1, an enantiomer thereof or a pharmaceutically-acceptable salt thereof, and a pharmaceutically-acceptable diluent or carrier.

25 23. A method of treating or preventing a condition or disorder arising from dysfunction of nicotinic acetylcholine receptor neurotransmission in a mammal comprising administering a therapeutically effective amount of a pharmaceutical composition according to Claim 22, to said mammal effective in treating or preventing such disorder or condition.

24. A method for the treatment or prophylaxis of a human disease or condition in which activation of the  $\alpha 7$  nicotinic receptor is beneficial comprising administering a therapeutically effective amount of a pharmaceutical composition according to Claim 22.

5 25. The method of Claim 24, wherein said human disease or condition is selected from: neurological disorders, psychotic disorders or intellectual impairment disorders.

26. The method of Claim 25, wherein said human disease or condition is selected from: Alzheimer's disease, learning deficit, cognition deficit, attention deficit, memory loss,  
10 Attention Deficit Hyperactivity Disorder, anxiety, schizophrenia, mania, manic depression, Parkinson's disease, Huntington's disease, Tourette's syndrome, neurodegenerative disorders in which there is loss of cholinergic synapse, jetlag, cessation of smoking, nicotine addiction including that resulting from exposure to products containing nicotine, craving, pain, and ulcerative colitis.

15 27. The use of a compound according to Claim 1, in the manufacture of a medicament for the treatment or prophylaxis of diseases or conditions in which activation of the  $\alpha 7$  nicotinic receptor is beneficial, neurological disorders, psychotic disorders, intellectual impairment disorders, Alzheimer's disease, learning deficit, cognition deficit, attention  
20 deficit, memory loss, Attention Deficit Hyperactivity Disorder, anxiety, schizophrenia, mania or manic depression, Parkinson's disease, Huntington's disease, Tourette's syndrome, or neurodegenerative disorders in which there is loss of cholinergic synapses.

28. The use of a compound according to Claim 1, in the manufacture of a medicament  
25 for the prophylaxis jetlag, pain, or ulcerative colitis.

29. The use of a compound according to Claim 1, in the manufacture of a medicament for facilitating the cessation of smoking or the treatment of nicotine addiction or craving including that resulting from exposure to products containing nicotine.